

Case Report

Behavioral Feeding Intervention for a Young Child: Parent Training Beyond The Mealtime Routine

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Abstract

This case study describes a behavioral parent training approach to improve feeding compliance in a young child enrolled in a home-based early intervention program. An individualized treatment plan was developed using functional behavioral assessment to improve compliance across several family routines. Caregivers received coaching in prevention and response techniques targeted to the child's feeding and behavioral concerns and then implemented these strategies during natural family routines. Progress monitoring was completed by both the early intervention provider and the child's caregivers to track feeding skill improvement (i.e., number of bites accepted at mealtimes) as well as compliance with caregiver directions. Data across the intervention course demonstrate that widening the scope of intervention beyond the feeding routine was associated with improved feeding behavior as well as overall increases in compliance. Implications for addressing behavioral feeding problems as they relate to other behavioral concerns in young children are discussed.

Keywords: Feeding; Behavior; Parent training; Early childhood; Single case method

Introduction

Theoretical basis for treatment

The objective of this article is to present a treatment approach to feeding difficulties that utilized a behavioral treatment applied to the parent-child relationship, both during mealtimes and across other daily routines. Feeding problems are a very common concern for families with young children. Prevalence of feeding disorders range from 25% of infants and young children to as high as 62% of parents of toddlers reporting more than one feeding concern [1-3]. A wide range of behaviors are associated with feeding difficulties among young children which include: eating too little, refusing to eat certain foods or "picky eating", delay in self-feeding, lack of self feeding, and refusal to eat food.

The term "feeding" is used to emphasize the interactions between child and caregiver that are characteristic of eating in infants and young children [1]. In addition, parents often describe these children as non-compliant in general and report difficulties with managing their behaviors throughout daytime routines. Current evidence-based behavioral interventions to address feeding problems emphasize appetite manipulation [4], differential reinforcement [5,6], extinction [5,7,8] and physical guidance of appropriate feeding response at mealtimes [8,9]. Differential reinforcement has proven to be an effective treatment for most feeding problems and is useful with children of varying ages, in different settings, and across change agents. However, very severe feeding disorders may require more aversive procedures such as physical guidance and extinction procedures.

Among children with feeding disorders, behavioral compliance extends beyond the mealtime routine and this factor is often overlooked in feeding interventions. Children with feeding disorders

often engage in challenging behaviors throughout the daytime routine such as not following parent directions, difficulty with transitions, problem behavior in public places, resisting toilet training and sleeping routines, and physical aggression [10]. Further, children who present with feeding disorders also have a high co-morbidity of developmental delays in domains other than self-care (e.g., feeding skills) such as, communication and cognitive skills, and thus, require interventions that are individualized to their unique needs [11,12]. Thus, it is imperative that professionals consider a broader approach when addressing feeding disorders in young children, one that considers the child's developmental level as well as behavioral compliance throughout daytime routines.

Positive Behavior Support Framework

This case study will present an applied example of extending evidence-based behavioral treatment, specifically, Positive Behavior Support (PBS) for feeding concerns to behavioral management strategies across daytime routines with caregivers of a two-year old child. PBS is an evidenced-based approach to changing behavior by applying a problem-solving framework while also recognizing and accounting for the significance of the family-specific strengths and values [13]. PBS is distinguished from traditional behavioral intervention approaches in that it occurs in the natural setting (e.g., home, childcare) and caregivers are coached by professionals to deliver the behavioral interventions [14]. Further, PBS coaches continually provide caregivers with developmentally appropriate ideas and information to support the child's overall development [14]. In the PBS framework, functional assessment is utilized to identify the 'function' of a child's behavior from which the therapists and parents design an intervention plan [13].

Table 1: Mealtime functional behavior assessment.

Antecedents	Target Behavior(s)	Consequences
<ul style="list-style-type: none"> Derrick is typically playing with toys or watching TV in the common areas of the house Parent request given from several feet away for Derrick to stop playing and come to the table to eat 	<ul style="list-style-type: none"> Derrick cries, yells 'no', and throws things off of the table Derrick ignores and/or refuses several times Derrick repeatedly refuses food (i.e., throwing food, turning his head, and spitting out food) 	<ul style="list-style-type: none"> Parents carry or lead Derrick by the hand to the table Parents verbally redirect Derrick many times Parents attempt to feed Derrick by holding the utensil to his mouth
	Function: <ul style="list-style-type: none"> Get out of mealtime Get attention 	<ul style="list-style-type: none"> Derrick plays or talks with caregivers and is allowed to leave the table when caregivers finish eating Derrick is given snacks or milk shortly after mealtime to consume while he plays

Case Presentation

Derrick, a 30 month-old boy, was referred to the state early intervention program by his pediatrician due to a history of significant feeding concerns and parent reported difficulty managing his noncompliance throughout daily routines. His parents' primary concerns were that he was underweight for his age, he accepted only three food types (i.e., yogurt, crunchy snacks, and potato fries), ate very slowly, and he refused to eat almost all new foods with refusal behaviors characterized as hitting, throwing food and toys, and screaming 'no' during mealtimes. His food refusal behaviors were reported to have occurred since approximately 15 months of age when parents began to introduce more solid foods into his primarily liquid diet. In addition, parents reported that Derrick's food refusal had significantly worsened in the past few months.

Derrick's birth history was significant for prematurity (35 weeks gestation). Medical history was notable for diagnoses of failure to thrive, reflux, and esophagitis at the age of 9 months. At the time of these diagnoses, Derrick's parents were advised by the gastroenterologist to supplement Derrick's daily diet with approximately 500-600 calories per day of high-calorie liquids. Derrick continued receiving liquid supplementation at 21 months of age when he was evaluated for the Part C state early intervention program. A multidisciplinary team used the Battelle Developmental Inventory (BDI-2; [15]) to identify developmental strengths and weaknesses and results indicated that Derrick had significantly delayed expressive communication skills (Standard Score [SS] = 55), and mildly delayed cognitive skills, particularly in regard to attention (SS = 77), and low average adaptive skills due to significant feeding concerns (SS = 85). The Part C team recommended speech therapy and Derrick received ten months of intervention with a Part C speech and language pathologist to address his feeding and communication delays. A progress update with the Part C team (consisting of the family, service coordinator, and provider) after this time indicated that Derrick's communication skills had improved to a developmentally appropriate level; however, he had made little progress with food acceptance and compliance with mealtime routines. As such, the team decided to implement behavioral feeding interventions as the next line of treatment. At 30 months of age, behavioral feeding services with an Early Intervention (EI) provider were implemented. The EI provider was a school psychologist with expertise in behavioral pediatric feeding disorders, working under the supervision of a licensed psychologist.

Assessment

Problem identification

As part of developing an individualized family treatment plan

to address the feeding concerns noted above, a follow-up parent interview and in-home observation during family mealtime were completed. An adaptation of the Functional Assessment Interview (FAI) was used to determine the antecedents, consequences, and function of Derrick's difficult mealtime behaviors [6,16]. Derrick and both of his parents were present during the assessment. Results of the mealtime functional assessment are outlined in (Table 1).

During the baseline assessment, Derrick was observed to chew and swallow only two bites of food at the family mealtime, lasting approximately 30 minutes. Self-fed bites were tallied as they occurred. Notably, Derek also engaged in high levels of noncompliance outside of mealtime, during an additional 30 minutes of the home observation before and after mealtime, in which a ratio was calculated to represent number of times Derrick complied the first time to each direction given by his parent. Specifically, Derrick refused to comply with directions given by mom or dad on average, 85% of the time during the 30 minutes of additional home observation. Parents reported that this was typical during the daily routine. Examples of daily situations in which Derrick was routinely noncompliant included a caregiver direction to stop a preferred activity (e.g., TV watching, playing outside), or to begin a non-preferred routine (e.g., sleeping/napping). Derrick's noncompliant behaviors included: screaming, running away, and saying 'no', and the function of his behavior was typically escape motivated. While not an original focus of the intervention for Derrick's feeding concern, his noncompliance during and outside of mealtimes became critical to improving his feeding behaviors later in the course of the intervention.

Family-centered intervention plan development

Using the guiding framework of PBS, the EI met with Derrick's parents before implementing any behavioral interventions to address family priorities and motivation and to ensure buy-in. This was a critical step considering that Derek's parents would be acting as the primary interventionists with weekly coaching from the EI, and in so doing we wanted to determine how the feeding concern was conceptualized by the family (i.e., medical and/or behavioral concerns) and how receptive both parents were to environmental intervention, as consistency of intervention implementation is critical for improvement. Medical tests ruled out pulmonary aspiration and indicated Derek's reflux was appropriately medically managed. This information, along with speech therapy progress reports noting that Derrick had all oral-motor capabilities necessary for feeding, led Derek's parents to conceptualize his current feeding concerns as primarily behavioral and they endorsed readiness to implement a behavior change plan. A description and graphic display of the behavioral sequence (antecedent-behavior-consequence) detailed

Table 2: Mealtime behavioral intervention plan.

Preventions	Replacement Behavior(s)	Modified Responses
<ul style="list-style-type: none"> Appetite manipulation 	<ul style="list-style-type: none"> Derrick will self-feed seven new age-appropriate foods. 	<ul style="list-style-type: none"> Clear directions
<ul style="list-style-type: none"> Choices of new foods 	<ul style="list-style-type: none"> Derrick will self-feed seven or more bites of food at daily mealtimes with minimal prompting 	<ul style="list-style-type: none"> Chewing instruction
<ul style="list-style-type: none"> Consistent mealtime and snack routine 		<ul style="list-style-type: none"> Differential reinforcement including planned ignoring of incompatible behaviors
<ul style="list-style-type: none"> Prompts 		
<ul style="list-style-type: none"> Timer 		
<ul style="list-style-type: none"> Shorter mealtime duration 		
<ul style="list-style-type: none"> Eat meals together 		

above was reviewed with the family. Family-driven feeding goals were then developed at the beginning of treatment as follows:

In three months, Derrick will self-feed seven new age-appropriate foods.

Derrick will self-feed seven or more bites of food presented at daily mealtimes with minimal prompting given by caregivers.

A ‘self-fed bite’ was defined by the EI and caregivers as approximately one child-size spoon of food with little spilling. ‘Minimal prompting’ was defined as three or fewer verbal or physical prompts during each mealtime. The intervention goals were broadened to address Derrick’s behavior outside of mealtime as treatment progressed, described in the sections below.

Intervention Plan Implementation

Parent training

First, the team developed intervention strategies which were categorized as: 1) preventions, 2) replacement behaviors, and 3) modified responses. These categories (Table 2) correspond directly to the mealtime functional assessment categories (e.g., antecedents, target behaviors, and consequences, respectively). Specifically, preventions are designed to replace the antecedents which triggered Derrick’s problem behaviors; replacement behaviors are the new skills Derrick needed to learn to replace the problematic target behaviors; and finally, modified responses replace consequences and refer to adult responses which reinforce new learning and redirect problem behavior [6]. Parent training followed a typical coaching sequence consisting of discussion, modeling by the EI, role play, and finally, implementation with corrective feedback.

The preventions were selected to promote a healthy mealtime routine. This included an emphasis on appetite manipulation, or strategically limiting liquid intake throughout Derrick’s daily routine to ensure he felt hunger increasing prior to mealtime and decreasing during and after mealtimes. Thus, drinks were offered only at least ten minutes after meals and were limited to 4-5 ounces at a time. Before mealtimes, parents were taught to select a new food to present at mealtime along with three foods he currently accepted. Initially, new foods were selected based on their similarity in taste and/or texture to foods in Derrick’s current repertoire, and then gradually expanded. A consistent mealtime/snack routine in regard to time of day and location was emphasized, along with, providing verbal and gestural prompts before mealtimes, and the use a timer to cue Derrick for transition to mealtime. At mealtimes, caregivers ensured that all family members ate together, all food and drink was consumed at the

table, television and other distractions were off, and mealtimes were no more than 15 minutes long, using a timer to teach Derrick the expected length.

Another key component of the intervention plan involved teaching Derrick’s parents to use ‘new responses’ in reaction to both the target and replacement behavior(s). The EI coached Derrick’s parents to use differential reinforcement when a direction or prompt was given at mealtimes. This included beginning with a clear direction, immediate presentation of food, positive attention contingent upon accepting a bite of target food, and planned or deliberate ignoring of all incompatible behaviors. To increase Derrick’s eating pace, parents were encouraged to model appropriate chewing behavior. When this was not sufficient, Derrick’s parents were instructed to provide agentle physical prompt (i.e., tap on his cheek) without any verbal statement to increase eating pace. Parents were cautioned to limit the use of this prompt due to the attention component involved.

Progress monitoring

Number of self-fed bites was used as the primary indicator for response to the interventions listed above and is displayed in (Figure 1). These data were collected by the EI during the initial mealtime functional assessment, during weekly home-based treatment sessions, and by Derrick’s parents during mealtimes to more accurately assess his progress with feeding skills across the daily routine. Parents tracked self-fed bites at two mealtimes during each week, with the exception of week 7, during which only one data point was collected by parents. Thus, each data point represents an average of the three data points collected in any given week (self-fed bites during the intervention session and two additional mealtimes); week 7 represents an average of two data points. The second phase of the intervention is described in more detail below.

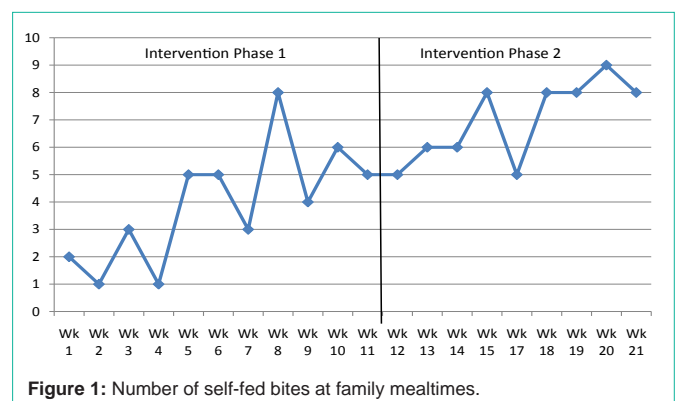


Figure 1: Number of self-fed bites at family mealtimes.

Derrick's progress varied over the first 8 weeks ranging from 1 to 8 self-fed bites over the first 10 weeks. By week 11, his behavior had stabilized to an average of 5 self-fed bites over the final three weeks of the treatment phase. Each bite was approximately 1 teaspoon and when total bites per day were aggregated we estimated that Derrick was not consuming the recommended 1,000-1,400 calories per day for a two-year old child, although he was still within an appropriate weight for height percentile [17]. Derrick's parents reported inconsistencies with the application of differential reinforcement during weeks seven and nine. Specifically, they reported difficulty ignoring some attention-seeking behaviors such as singing and giving hugs and kisses. Thus, coaching sessions focused on how to apply planned ignoring and differential reinforcement with these particular behaviors.

After eleven weeks of treatment the data suggested that Derrick still displayed many food refusal behaviors at mealtimes, most often observed as throwing food, yelling 'no', and hitting his parents. Follow-up parent interview and observations from sessions demonstrated that his general noncompliance was of significant concern and most likely impacting his compliance with accepting new foods during family mealtimes.

Goal Revision and Broadening

To address the parent-child relationship throughout daily routines, more generalized compliance goals were then developed beginning at the twelfth week of intervention to:

Derrick will comply with parent directions four out of five opportunities during daily routines, including mealtimes.

Derrick's parents were then coached to apply the same principles and strategies throughout daily routines when giving a command. These strategies also included giving Derrick clear directions, using immediate and specific praise contingent upon compliance, and planned ignoring of minor refusal behaviors. Two key additions were added to the behavioral intervention plan outside of mealtimes. First, caregivers were taught to use minimal physical guidance or a 'follow-through' procedure when Derrick refused or ignored a one-step direction to ensure he did not escape the expectation. Guided follow-through prevents negative reinforcement via escape, thereby promoting compliance [18]. Follow-through was taught via a step-wise script: a) one-step direction given with 5 second wait, b) direction repeated with 5 second wait, c) question 'do you need help or can you do it yourself?' posed, d) statement given 'you must need my help', e) hand-over-hand guidance to complete the direction. Parents were coached to stop the process if Derrick chose to independently complete the direction at any step. The EI also taught parents to use a scripted time-out process when Derrick was physically aggressive with others. The time-out process was modeled after that used in Parent-Child Interaction Therapy (PCIT; [19]).

Results

We continued to monitor self-fed bites during weeks 12-21. As shown in (Figure 1), Derrick improved his self-fed bites to an average of eight bites of food per mealtime (i.e., approximately eight child-size spoons) over the last three weeks of intervention. His daily food consumption at this stage of intervention more closely aligned with the USDA recommended caloric guidelines [17].

Given that the intervention was broadened to increase Derrick's

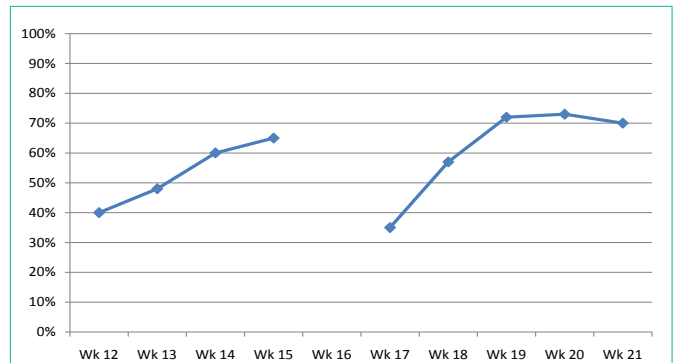


Figure 2: Rate of compliance during in-home observations.

compliance with adult directions throughout the daily routine, data were also collected to assess progress with this goal. Specifically, the EI recorded the percentage of opportunities in which Derrick followed a direct command with only one warning during each weekly session (i.e., approximately one hour time-frame). These data are displayed in (Figure 2). For this phase of progress monitoring, data were only collected by the EI due to the fact that Derrick's parents were learning a new, relatively difficult skill and data collection could have negatively impacted their ability to consistently follow the steps being taught; thus, each data point represents one observation rather than an average. Given that compliance was operationalized as following through with parent directions across routines, including mealtimes, data were collected in this manner. Specifically, each data point represents compliance across both mealtime and other parts of the daily routine that were observed during weekly intervention sessions (e.g., interactive play, clean up, dressing). Overall, by the last session, Derrick had improved from approximately 40-70% compliance during intervention observations, but was still below the goal of 80% compliance.

Barriers to Treatment Progress

Several barriers to treatment are worthy of mention. First, Derrick was hospitalized during the second half of the intervention plan due to significant pulmonary health issues. These disruptions in the course of parent training likely impacted Derrick's parents' ability to implement the strategies with fidelity and consistency. Specifically, following a hospitalization during week 16, parents reported that it was extremely difficult to deny Derrick's requests to eat away from the table during mealtimes, drink milk instead of eating solid foods, and/or eat only his favorite foods. Data were not collected this week as the session had to be canceled, but we hypothesized that the stress and disruption in routine associated with hospitalization affected Derrick's progress. Specifically, Derrick's decreased compliance rates in weeks 17 and 18 may have been associated with this disruption.

Inconsistency across caregivers likely presented an additional barrier. Derrick's parents reported that they were not always consistent with implementing their new responses. Specifically, Derrick's father reported difficulty with following through and implementing time-out. Derrick's father was also observed to use planned ignoring less than Derrick's mother during family mealtimes during which the EI was present, although this is anecdotal information and no specific data comparing parent implementation were collected. Finally, because Part C early intervention services end when a child turns

three years old, home-based intervention sessions did not continue after this time. Derrick was found eligible for speech therapy through the Part B intervention program (ages 3-21 years); however, behavioral parent training for feeding concerns is not a component of this program.

At the time Part C services ended, Derrick's family had received five months of behavioral feeding intervention services. Unfortunately, these services were arbitrarily suspended due to program age guidelines. Best practices would have warranted continued intervention services so as to ensure maintenance of skills as well as transition to an intervention fade-out plan.

Long-Term Follow-Up

Follow-up data were collected approximately nine months after the last home-based intervention session. At this time, Derrick's mother reported that his mealtime behavior had continued to improve but that compliance throughout daily routines was less consistent. Data were collected for the following: self-fed bites, behavioral compliance, and an overall assessment of feeding behavior. Data documenting Derrick's self-fed bites at mealtime were collected by his mother over a two week time frame. Specifically, she recorded self-fed bites at three mealtimes each week for two weeks. For week one, Derrick self-fed approximately 11 bites of food per mealtime and for week two, Derrick self-fed approximately nine bites of food per mealtime. These data demonstrate a continued improvement in self-feeding at long-term follow-up, compared to both the first and second phase of intervention.

Similar data were gathered by Derrick's mother to track his compliance with parent directions throughout daily routines. To align with previous data collected on Derrick's compliance, the percentage of opportunities in which Derrick followed a command given with only one warning was recorded. The EI trained Derrick's mother via phone in a method for tracking her commands, warnings, and Derrick's responses. Considering that funding for Part C services had ended, this method of communication between provider and family afforded a more time- and cost-efficient means for gathering follow-up data. Notably, because these data were collected by Derrick's parents and not the EI, data cannot be directly compared. During weeks one and two, Derrick complied with 65% and 70% of directions given, respectively. These ratios were based on an average of compliance behaviors during three one-hour intervals throughout the weekly routine. Guidance was provided to select from a variety of routines, including mealtime, dressing, and playtime. These data suggest that Derrick maintained compliance rates which were achieved at the end of the home-based treatment.

Finally, Derrick's mother completed a standardized assessment tool, the Behavioral Pediatric Feeding Assessment Scale (BPFAS) [20]. This 35-item scale assesses feeding patterns and mealtime behavior of young children, and has reliably distinguished groups of children with healthy feeding behavior from those with feeding problems in previous research [20]. The scale provides information both on child behaviors as well as parents' feelings and strategies for managing feeding problems. Although the BPFAS was not administered prior to the start of intervention and pre-post comparisons cannot be calculated, these ratings do provide a standardized assessment of his long-term progress compared to norms. Results indicated that

Derrick's total feeding problems score of 64 was below the normative mean of children with feeding problems (i.e., mean total frequency score of 85). In addition, the degree to which Derrick's mother viewed his behaviors as problematic (score of 6) was also below the normative mean of children with feeding problems (i.e., mean total frequency score of 9). In terms of variety of food consumption, Derrick's mother indicated that he was eating foods from each food group at a frequency of 'sometimes' to 'always'. Further, Derrick's mother reported that the problem behaviors for which treatment was initiated (crying and spitting out food), 'rarely' to 'never' occurred. Finally, in terms of parenting skills, Derrick's mother reported a low level of frustration during mealtimes and a high level of confidence in her ability to manage her son's mealtime behavior. Overall, these results validate the follow-up progress monitoring data gathered and highlight that Derrick's feeding and mealtime behavior aligned with typical norms several months following intervention.

Limitations

Several limitations associated with case study are worthy of mention. First, data on food consumption were measured as 'self-fed' bites. While we approximated each bite to be equal to a teaspoon, we cannot be for certain and we were not able to estimate caloric intake accurately. However, Derrick's food consumption was adequate to maintain a healthy weight and promote growth. Second, during the subsequent intervention phase beginning at week 12, data on compliance behaviors were collected across mealtimes and other parts of the daily routine and then collapsed into a single data point. While this limits the ability to compare compliance rates between mealtime and other routines, reasons for doing so were two-fold: 1) data were only collected by the EI at the one-hour weekly visit due to the high demand on parents for learning the new strategies taught and 2) data needed to reflect progress toward the compliance goal originally set, which was operationalized as following through across all daily routines. Another limitation related to data collection was that we only had BPFAS data for long-term follow-up. Ideally, these data would have also been collected pre- and post-intervention to allow for more detailed analyses. Finally, ceasing intervention services when Derrick turned 3 years-old was a major limitation of this case study. It would have been appropriate to continue with the intervention services to ensure Derrick's behavior had stabilized and to assist the family with the transition to a fade-out plan. While early intervention services are at the core of Part C and Part B of IDEA, the transition from Part C home-based services to Part B school-based services is not as coordinated and integrated as necessary to ensure delivery of effective and recommended practices [21].

Implications of the Case

This case study demonstrates that a home-based behavioral intervention was effective at reducing child non-compliance across mealtimes and daily routines. While the initial family-centered intervention only addressed feeding concerns, we quickly realized that the intervention must be broadened to address non-compliance behaviors which occurred throughout the daily routine. As a result, child self-fed bites increased from 2 at baseline to 5 and 10 at post-treatment and follow-up, respectively. Further, child compliance to caregiver commands throughout daily routines increased considerably from 40-70%. While this was slightly below our goal

of 80% compliance, the caregivers were satisfied with the progress, compliance rates were maintained at long-term follow-up and data collected with the BPFAS suggested age-appropriate feeding skills relative to a normative group.

The primary lesson learned by this study was that Derrick's non-compliance behaviors extended far beyond mealtimes. Specifically, home-based treatment provided us a unique opportunity to observe disrupted parent-child interactions during daily routines, a finding we may not have discovered in clinic-based treatment. Moreover, this finding was key to reducing child non-compliance, increasing child self-feeding skills, as well as equipping caregivers with much needed parenting strategies.

One clear implication for this case is the importance of caregiver motivation [22]. Behavior change is difficult, and within the positive behavior support framework modifying caregiver responses to child behaviors is necessary and critical to teaching child replacement behaviors [13]. Caregivers of children with feeding disorders report high levels of stress, thus, making it more difficult to implement newly learned strategies with consistency and fidelity. Common logistical barriers to intervention adherence and follow-through noted in the literature base include lack of time, transportation limitations, and difficulty with transfer of skills [23]. Due to the nature of the Part C service delivery model, many of these barriers were addressed by providing ongoing services in the home at a time occurring within the family's natural routine. In addition, sense of engagement and commitment to treatment has been found to improve when patients or families are involved in goal-setting and when modifications are made as situational demands change [24]. Both of these practices were incorporated into the intervention process with Derrick's parents, first by utilizing a team-based approach to goal setting in which parents are key team members and second, by both broadening the intervention focus beyond mealtime and changing the method of data collection during the second phase of intervention. This likely contributed to parent follow-through with both data monitoring and behavioral strategies.

Suggestions for Future Research

This case study focused on parent coaching as a means of addressing child disruptive behaviors, where in parents were responsible for implementing behavioral strategies with coaching and feedback from a professional. While this aligns with best practice for ecologically relevant intervention for young children, a disconnect was thereby created between the focus of the intervention and the focus of the goals and data monitoring. Specifically, each of the strategies taught were parent-focused; however, goals were child-focused and data were only collected on Derrick's progress. As such, outcome data may not fully capture the progress made by the family. The literature suggests that the parent-child dynamic is central to feeding and as such, behavioral feeding goals and progress monitoring may need to more clearly address the parent role. Future research might incorporate coding of parent's use of strategies taught and examine how parent behavior correlates with child outcomes.

Further evaluation of the efficacy of this approach with children with feeding problems enrolled in the Part C program is warranted. Part C policies and PBS values emphasize child and family-centered

practices which are implemented throughout natural routines; therefore, in theory the two go hand in hand [13,21]. However, eligibility policy resulted in premature termination of intervention services in this study. In our local system, children who present with feeding difficulties as well as challenging behavior in the absence of developmental delays are unlikely to qualify for Part B program services. In Derrick's case, although he had not yet achieved the goal of 80% compliance across daily routines, he also did not exhibit a developmental delay significant enough or in the appropriate areas to qualify him for continued services through Part B. Thus, intervention had to be terminated due to program eligibility criteria rather than child outcome data. Future studies may identify more effective means of transitioning families between the Part C and Part B program as well as flexible programs and funding to support the needs of children and families who age out of Part C but do not qualify for Part B services.

Follow-up case studies might also consider examining the relationship between strategy implementation across caregivers and overall treatment outcomes. Again, in this study each parent self-reported differences in their daily implementation of parenting strategies. While this was not substantiated with empirical data, future studies may consider collecting data on strategy implementation fidelity and how to increase fidelity through modeling and coaching.

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